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TRANSMITTAL LETTER FOR APPLICATION TO PERFORM MOBILE ENHANCED MULTI-PHASE EXTRACTION EVENTS AT NAVAL EXCHANGE SERVICE STATION MILLINGTON
SUPPACT TN
4/26/1999
BAT ASSOCIATES, INC.

BAT

BAT Associates, Inc.

ENVIRONMENTAL, HEALTH, SAFETY SERVICES

704 S. Illinois Avenue, Suite C-202
Oak Ridge, TN 37830
(423) 481-8105 • FAX (423) 481-0899

April 26, 1999

Mr. Ghattas Murr
State of Tennessee
Division of Underground Storage Tanks
Perimeter Park, Suite E-645
2510 Mt. Moriah
Memphis, Tennessee 38115

SUBJECT: APPLICATION TO PERFORM MOBILE ENHANCED MULTI-PHASE EXTRACTION (MEME) EVENTS AT THE NAVAL EXCHANGE SERVICE STATION, NAVAL SUPPORT ACTIVITY, MILLINGTON, TENNESSEE - FACILITY I.D. NO. 0-791718

Dear Mr. El-Murr:

On behalf of our client, the Department of the Navy - Southern Division, BAT Associates, Inc. (BAT) is submitting the attached application for your review and approval. The Division of Underground Storage Tanks approved the request to perform the first four events January 25, 1999. Those events have been completed.

The next MEME event is scheduled for May 17, 1999. The remaining MEME event schedule is as follows:

Event Number	Scheduled MEME Event Date
1	January 19, 1999 (completed)
2	February 10, 1999 (completed)
3	March 15, 1999 (completed)
4	April 15, 1999 (completed)
5	May 17, 1999
6	June 18, 1999
7	July 12, 1999
8	August 2, 1999

The MEME events have been performed for a duration of eight hours at ten extraction points, consisting of the initial three hours at monitoring wells MEM-2, MEM-8, MEM-13, and MEM-14, the ensuing three hours at MEM-1, MEM-3, MEM-7, and MEM-12, and the final two hours at MEM-6 and B-3. Due to the small amount of hydrocarbons removed from MEM-6 and B-3 over the past events, BAT recommends omitting these two wells from the extraction array setup. We recommend adding an additional hour of extraction to the initial four well array (MEM-2,-8,-13,-14), and an additional hour to the second well array (MEM-1,-3,-7,-12).

We will continue the next scheduled MEME and well extraction setup at your direction. Should you have any questions or require additional information, please call me at (423) 481-8105.

Sincerely,
BAT Associates, Inc.

Craig M. Aurin
Task Leader

Attachment

cc: R. Wilson - Dept. of the Navy
J. Karlyk - Dept. of the Navy
Project File - 983019

STATE OF TENNESSEE
DIVISION OF UNDERGROUND STORAGE TANKS

Attachment A
Application to Perform Mobile Enhanced Multi-Phase Extraction (MEME)

Submit the **original** of this application to the appropriate Division of Underground Storage Tanks field office for approval **before** performing a MEME event. Attach extra sheets if necessary.

1. Date: April 26, 1999
2. Facility I.D. Number: 0-791718
3. Facility Name: Naval Exchange Service Station

   Facility Address: Old Navy Road, Building 341
   Millington, TN 38054
4. Facility Telephone Number: (901)-874-5902
5. Name of UST System Owner: Randy Wilson

   Owner Address: Public Works Division - Environmental Department
   Code: 101, 5720 Integrity Drive
   Millington, TN 38054-5045

   Owner Telephone Number: (901)-874-5902
6. Type of Contaminant: BTEX, TPH
7. Number, Date and Length of Events Requested: Four events scheduled for 5/17, 6/18, 7/12, and 8/2/99. Each event to last approximately 8 hours each.
8. If the information is available, provide a table showing the contamination levels in each well. Provide a site map showing the locations of the monitoring wells if this information has not been previously submitted.
9. OBJECTIVE: State the purpose and reasoning for the event(s).

   Remove/reduce vapor, dissolved, adsorbed, and liquid phase hydrocarbons

10. List monitoring wells to be used for extraction:

MEM-757-1 through -3, MEM-757-6 through -8, MEM 757-12 through -14, and MEM-757-B3 for a total of ten (10) wells to be used for extraction.

11. List the order and configuration of the extraction wells:

Initial 3 hours at MEM-2,8,13, and 14. Ensuing 3 hours at MEM-1,-3,-7,-12, and final 2 hours at MEM-6 and B-3.

*BAT has recommended omitting wells MEM-6 and B-3 and adding an additional hour to the initial 4 wells and an additional hour to the ensuing 4 wells.

12. Describe the method for determining the vacuum radius of influence:

Digital manometer or magnehelic gauges

13. Describe your contingency plans if the wells do not react as predicted:

Modify our approach and/or fittings and attempt to contact TDEC personnel (if necessary)

14. Describe the safeguards for insuring contamination will not spread onsite or be drawn from offsite:

Will monitor drawdown and vacuum influence data during the event

15. Equipment to accomplish the objective.

Type of pump: liquid ring vacuum pump

Horsepower: >200 HP

Vacuum capacity (inches of Hg): ≥26 inches Hg (maximum)

CFM capability: >3,000 CFM (maximum)

16. Provide a diagram detailing the configuration of the wellhead and downhole extraction equipment. (Attached)

17. Describe the instruments for measuring stack velocities and vapor concentration levels.

Stack velocities - thermal anemometer vapor concentration levels - catalytic combustion VOC monitoring field instrument

18. Describe the calibration procedures for the instruments listed:

In accordance with factory recommendations

19. List the personnel that will be at the site, their job title and anticipated time at the site:

Name	Title	Time On-site
Dave Goodrich,	Principal	10 hours
Joe Lewis,	Field Services Manager	
Mark Patterson,	Senior Engineer	
Craig Aurin		
Julie DeKeyser		

20. Describe the disposal method for the extracted fluids.

Onsite disposal

16. Diagram detailing configuration of the wellhead and downhole extraction equipment.